

IN THE CLAIMS:

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1. (Previously Amended) A system for generating a response from an acquired signal and a challenge, the system comprising:

an acquisition device for creating a signal representation of said acquired signal; and
a responder that receives said challenge and generates said response that is a function of said signal representation, wherein said function is defined by said challenge.

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2-3. (Previously Cancelled)

4. (Previously Amended) A system, as in claim 1, where the acquired signal is one of the following: a biometric signal, a fingerprint image, a face image, an iris image, an audio signal, and a speech signal.

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5. (Previously Amended) A system, as in claim 1, where the acquisition device is one of the following: a camera, a biometrics sensor, a semiconductor-based fingerprint sensor, a micro-mechanical sensor, and a microphone.

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6. (Previously Amended) A system, as in claim 1, where the responder has two or more selectable functions, the selectable functions being selected by one or more configuration inputs and the selectable functions modifying the challenge.

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7. (Previously Amended) A system, as in claim 6, where the configuration inputs are connected to an external source that selects the selectable function.

8. (Original) A system, as in claim 7, where the external source includes one or more of the following:

a set of switches, a jumper block, a clock, a global positioning system signal, an external computer, and a pseudo-random number generator.

9. (Original) A system, as in claim 1, where the responder function includes one or more of the following: a checksum, a pseudo-random sample, a block of contiguous samples, and a function of selected samples of the signal.

10. (Original) A system, as in claim 1, where the acquisition device and the responder are both located on a single semiconductor chip.

11-14. (Previously Canceled)

15. (Previously Amended) A method for generating a response from an acquired signal and a challenge, comprising the following steps:

creating a signal representation of said acquired signal;

receiving said challenge; and

creating said response that is a function of the signal representation, wherein said function is defined by said challenge.

16. (Previously Amended) A computer product for generating a response from an acquired signal and a challenge that performs the following steps:

creating a signal representation of said acquired signal;

receiving said challenge; and

creating said response that is a function of the signal representation, wherein said function is defined by said challenge.

17. (Previously Amended) A business process for authenticating an acquired signal, the process comprising the steps of:

creating a signal representation of said acquired signal;

creating a challenge;

creating a response that is a function of the signal representation, wherein said function is defined by said challenge; and

authenticating the signal representation by comparing the response to the function of the acquired signal.

18. (Previously Amended) A business process, as in claim 17, where the acquired signal includes any one of the following: a fingerprint, face, iris, and voice.

19. (Original) A business process, as in claim 17, where the challenge response functions include any one or more of the following: signal values at discrete points, a mathematical function of discrete signal values, a hash of the signal values, and a checksum of the signal values in a delimited area.

20. (Previously Amended) A system for authenticating an acquired signal, comprising: a challenge generator for generating a challenge; and a verifier for authenticating a received signal by comparing a function of the acquired signal, wherein said function is defined by said challenge, to a response generated as a result of said challenge.

21. (Previously Amended) A method for authenticating an acquired signal, comprising the following steps:

creating a challenge; and

authenticating a received signal by comparing a function of the acquired signal,

wherein said function is defined by said challenge, to a response generated as a result of said challenge.

22. (Previously Amended) A computer product for authenticating an acquired signal that performs the following steps:

creating a challenge; and

authenticating a received signal by comparing a function of the acquired signal, wherein said function is defined by said challenge, to a response generated as a result of said challenge.

23. (Previously Amended) A system, as in claim 1, wherein said challenge identifies said function from two or more functions.

24. (Previously Amended) A system, as in claim 1, wherein said challenge identifies one or more parameters of said function.

25. (Previously Amended) The system, as in claim 1, wherein said signal representation can be verified by comparing said response to said function of the signal representation and the challenge.


26. (Currently Amended) A business process, as in claim ~~15~~17, wherein said challenge identifies said function from two or more functions.

27. (Currently Amended) A business process, as in claim ~~15~~17, wherein said challenge identifies one or more parameters of said function.

28. (Currently Amended) A method, as in claim ~~17~~15, wherein said challenge identifies said function from two or more functions.

29. (Currently Amended) A method, as in claim ~~17~~ 15, wherein said challenge identifies one or more parameters of said function.

5 30. (Previously Amended) A system, as in claim 20, wherein said challenge identifies said function from two or more functions.

 31. (Previously Amended) A system, as in claim 20, wherein said challenge identifies one or more parameters of said function.

10 32. (Previously Amended) A method, as in claim 21, wherein said challenge identifies said function from two or more functions.

15 33. (Previously Amended) A method, as in claim 21, wherein said challenge identifies one or more parameters of said function.